Abstract of the Disclosure

Provided is an adaptive packet transmission method in a communication system using a cellular mobile multibeam satellite. The method includes the steps of: a) periodically reported, from mobile stations, of receiving power levels of beam pilot signals transmitted in a plurality of beams; b) estimating a path gain between beams and the mobile station based on the reported average power levels of beam pilot signals; c) determining priorities for packets to be transmitted to each of the mobile stations; d) selecting a beam requiring the lowest transmission power for transmitting the packet having the highest priority, power required for satisfying allocating the lowest predetermined packet reception quality when the packet is transmitted in the selected radio resource, by using the path gain estimated for each of the mobile stations; and e) if the radio resources and/or the transmission power that can be used are not sufficient or if there is a packet to be allocated, performing the step c).

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